

APPLICANT RESPONSE TO COMMENTS (V3)
ROLLIN RIDGE ESTATES – PRELIMINARY PLAN APPLICATION (SP181)
October 31, 2018

Preliminary Plan (sheet 2)

- Revised “State Hwy No. 83 to “State Hwy 83” per Enumerations comment.
- Added drainage detention pond within easement to the northwest corner of the site per up-dated Drainage Report and up-dated Grading & Erosion Control Plan.
- Increased ROW width of Cherry Crossing Drive between Hodgen Rd and Prayer Tree Ct from 70’ to 80’ per up-dated Traffic Impact Study.
- Revised edge of asphalt and traffic lane striping per up-dated Traffic Impact Study.

Grading & Erosion Control Plan (24”x36”)

- Added drainage detention pond within easement to the northwest corner of the site per up-dated Drainage Report.
- Addressed miscellaneous Engineering Review redline comments.

Letter of Intent

- Removed reference to “no deviations” within “Vehicular Access, Parking and Circulation” paragraph per Engineering Review redline comment.
- Added discussion related to the existing house per Planning Review redline comment.
- Added discussion related to “Preliminary Plan Approval Criteria” per Planning Review redline comment.

Traffic Impact Study

- See LSC Response to Comments attached.

Deviation Requests

- Submitted as a separate file per Engineering Review redline comment.
- See LSC Response to Comments attached.

NEPCO Review Letter

- Added applicant response to NEPCO Review Letter

ROAD AND TRAFFIC CONDITIONS

Area Roads and Streets

Figure 1 shows the roads in the vicinity of the site. The major roads are identified below followed by a brief description of each:

State Highway (SH) 83 extends from Colorado Springs north to Parker and areas of southeast Denver. In the vicinity of the site, SH 83 is classified as a Regional Highway (R-A). At this location, SH 83 is a two-lane rural highway with two- to four-foot shoulders and a speed limit of 60 miles per hour (mph). The intersection with Hodgen Road is signalized. Per the El Paso County 2040 *Major Transportation Corridors Plan (MTCP)*, SH 83 is projected to be expanded to a four-lane highway by 2040. Additionally, the southbound approach will have a dual left-turn lane and an exclusive right-turn lane by 2040. El Paso County also shows State Highway 83 as a future six-lane Principal Arterial. This is the requirement for right of way dedication will be determined by CDOT.

Hodgen Road is a two-lane paved Rural Principal Arterial that extends west from the intersection of Roller Coaster Road/Baptist Road to Eastonville Arterial). The speed limit on Hodgen Road is 40 mph adjacent to the site. *MTCP* shows Hodgen Road as a four-lane Rural Principal Arterial (180 feet of ECM).

Cherry Crossing Drive is a north/south, two-lane local road with a posted speed limit of 30 mph. Currently a T-intersection, the intersection of Cherry Crossing Drive/Hodgen Road would be converted to a full-movement, two-way stop sign-controlled intersection with this project.

Traffic Volumes

Turning movement traffic counts were conducted on Wednesday, June 21, 2017 from 6:30 to 8:30 a.m. and from 4:00 to 6:00 p.m. at the intersections of Hodgen Road with SH 83 and Cherry Crossing Drive, as shown in Figure 3. Raw count volume data is attached for reference. The figure also shows CDOT annual average daily traffic volumes.

Sight Distance

Field-measured sight distance to the west from the proposed site access along Hodgen Road is 695 feet, which meets the minimum required 360 feet of stopping sight distance on a 45-mph (design speed/40-mph posted speed) two-lane roadway prescribed in Table 2-17 of the *ECM*.

The required intersection sight distance for passenger vehicles is 500 feet. This distance is met. The required intersection sight distance for trucks is 775 feet; however, given the driver's eye for trucks is significantly higher than for passenger cars, this distance requirement is also met.

1
Please clarify what section is local and what your section should be classified as, and that you are requesting a deviation on the width of the road. FYI, the thickness will still need to meet arterial standards.

Summary of Comments on Rollin Ridge staff comments 10-2-18 with LSC Responses (working).pdf

Page: 4

Number: 1 Author: dsdnijkamp Subject: Engineer Date: 10/2/2018 3:50:17 PM

Please clarify what section is local and what your section **should** be classified as, and that you are requesting a deviation on the width of the road. FYI, the thickness will still need to meet arterial standards.

Status
jchodsdon Completed 10/17/2018 9:19:36 AM

Table 6: Queuing Analysis Results (2040 Background Plus Site-Generated Traffic)

Queue Data	Hodgen Road/ Cherry Crossing Drive			Cherry Crossing Drive/N. Site Access
	NB LT/TH	NBR	WBL	SBL
Taper Length				
ECM Standard (ft)	N/A	200**	170'	N/A
Proposed Taper Length (ft)		75'	100'	75'
Difference from ECM (ft)		+75'	- 70'	+75'
Full-Width Lane (Stacking + Deceleration) Length				
ECM Standard (ft)	275*	235**	355'	N/A**
Proposed Distance (ft)		105'	250'	90'
Difference from ECM (ft)		+105'	- 85'	+90'
Queuing (AM Peak Hour)***				
Maximum Queue (ft)	72'	69'	71'	34'
Upstream Block Time (%)	0%	0%	0%	0%
Storage Block Time (%)	0%	0%	0%	0%
Queuing (PM Peak Hour)***				
Maximum Queue (ft)	84'	90'	78'	45'
Upstream Block Time (%)	0%	0%	0%	0%
Storage Block Time (%)	0%	0%	0%	0%
<p>* Represents the distance between the intersections. ** These are ECM-standard Rural Collector values, however proposed Modified Rural Collector will have a lower design speed. ***Maximum queues reported in SimTraffic analysis are shown. ECM Table 2-26 shows general values for bay taper lengths for 12' lanes by design speed.</p>				

Not sure these numbers are correct, please check and correct as necessary

1

CONCLUSIONS AND RECOMMENDATIONS

- The site is projected to generate about 3,602 new/non-pass-by vehicle-trips on the average weekday. A significant portion of these non-pass-by trips are projected to be diverted trips from the Highway 83/Hodgen Road intersection.
- Approximately 194 vehicles would enter the site during the weekday morning peak hour, while 151 vehicles are projected to exit. During the weekday evening peak hour of adjacent street traffic, 195 vehicles would enter the site while 204 vehicles would exit.
- All approaches at the site access intersection with Hodgen Road and at the intersection of SH 83/Hodgen will operate at LOS D or better during both the short and long term during the weekday morning peak hour and evening peak hour following the addition of this development. It is assumed that SH 83 will be expanded to a four-lane highway from Hodgen Road south with dual southbound left-turn lanes in the long term (assumed for 2040).

Number: 1 Author: dsdnijkamp Subject: Contractor Date: 10/2/2018 3:50:18 PM

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- Proposed turn lane length designs, including deceleration (where applicable) storage and taper lengths, are projected to accommodate long-term queues at the intersections of Hodgen Road/ Cherry Crossing Drive and the North Commercial site access. Deviations to ECM-prescribed turn lane design criteria are shown in Table 6. Please refer to the attached lane exhibits and deviation requests.
- Please refer to the attached lane exhibits for Hodgen Road and the main access drive (Cherry Crossing Drive).
- **Roadway Classification:** LSC recommends that Cherry Crossing Drive south of Hodgen Road be classified as a “modified” Rural Collector roadway. The projected buildout ADT is 4,980 vehicles per day. Please refer to the attached lane exhibit. A deviation request for the modified standard roadway has been included with this submittal and would apply to the section of roadway from Hodgen Road south to the southernmost commercial site access.
- The ECM-standard roadway design elements, per Table 2-5 of the ECM, would be modified to accommodate the higher-than-Collector-standard traffic volumes and larger vehicles as follows:
 - Right- and left-turn bays would be included, where needed in addition to the two 12-foot-wide through lanes, to accommodate the projected higher-than-Collector-standard traffic volumes.
 - Outside shoulder widths of 8 feet, including 4 feet of paved shoulder and 4 feet of gravel shoulder – also to accommodate the higher-than-Collector-standard traffic volumes.
 - No on-street parking and no individual lot access except south of the south commercial access.
 - Seventy-foot right-of way north of the south commercial access, tapering/variable right-of-way south of the south commercial access point, and Local standard 60 feet of right-of-way with two 5-foot public improvements easements south of the transition section south of the commercial access.
 - An intersection spacing of 290 feet between the two commercial access drives and 360 feet between Hodgen Road and the first commercial access point is requested where Collector street spacing is one quarter mile – this is included in the deviation request.
 - All other streets would be classified as Rural Local.
- **Roadway Right-of-Way:** The site plan shows right-of-way dedication for a 90-foot half-right-of-way for both Hodgen Road and State Highway 83. The plan shows right-of-way dedications for Hodgen Road of 60-feet between Cherry Crossing Drive and State Highway 83 and 40 feet west of Cherry Crossing Drive. The plan shows a 40-foot right-of-way dedication for State Highway 83.
- **Deviation Requests:** Two deviation requests accompany this submittal. The first is for the projected ADT and modified Rural Collector cross-section for Cherry Crossing Drive south of

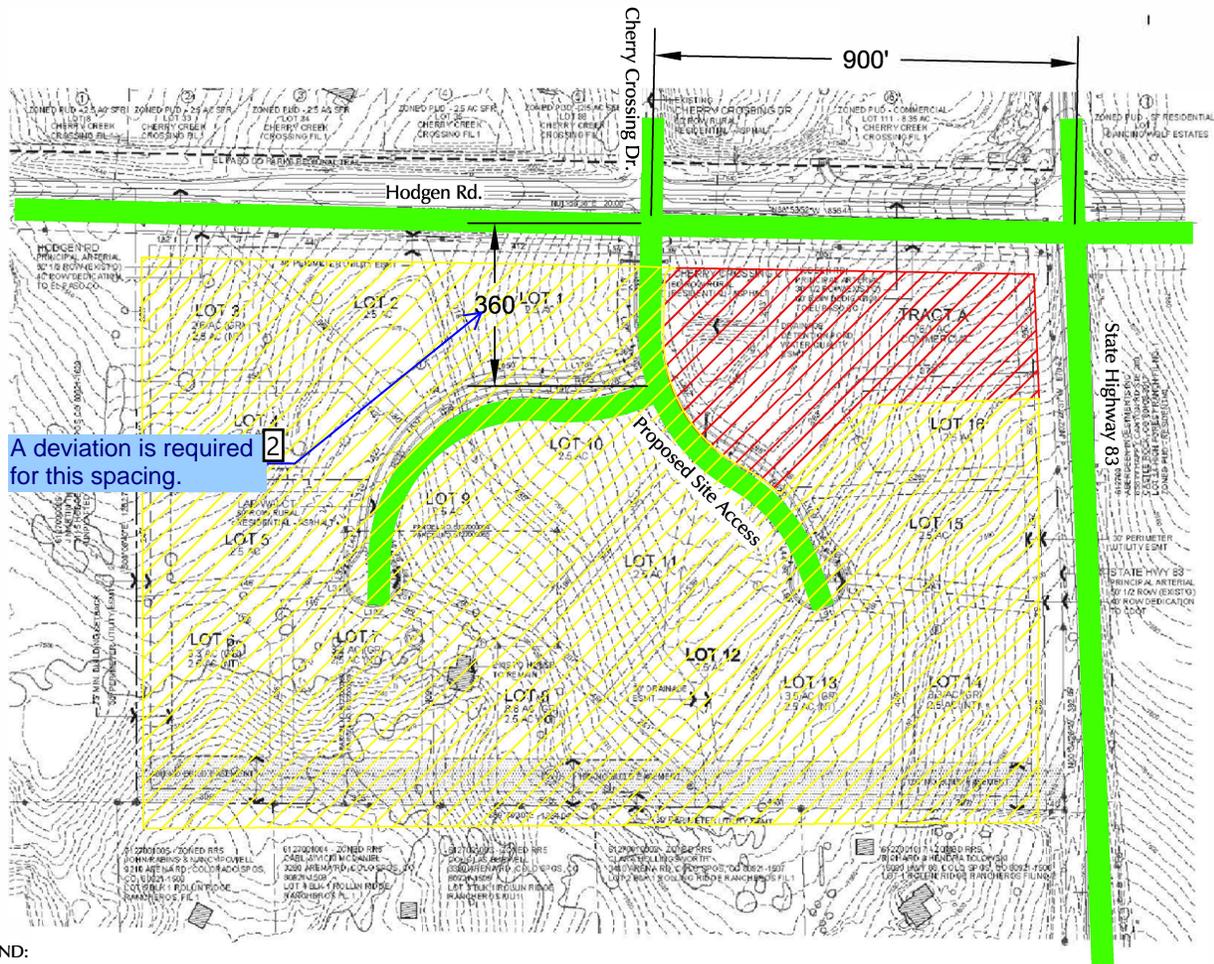
deviations for the shortened Cherry Crossing NBRT¹ lane and taper; and the shortened intersection spacing on Cherry Crossing between the commercial access and Hodgen will be needed.

☰ Number: 1 Author: dsdnijkamp Subject: Engineer Date: 10/2/2018 3:50:19 PM

deviations for the shortened Cherry Crossing NBRT lane and taper; and the shortened intersection spacing on Cherry Crossing between the commercial access and Hodgen will be needed.

Status

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LEGEND:

- = Commercial Development Site (See Figure 2b for Commercial Site Plan Detail)
- = Residential Development Site

Figure 2a
Site Plan

Rollin Ridge Estates (LSC #174470)

Number: 1 Author: jchodsdon Subject: Rectangle Date: 10/2/2018 3:50:54 PM

 Author: jchodsdon Subject: Sticky Note Date: 10/2/2018 3:50:52 PM
changed to Not to Scale

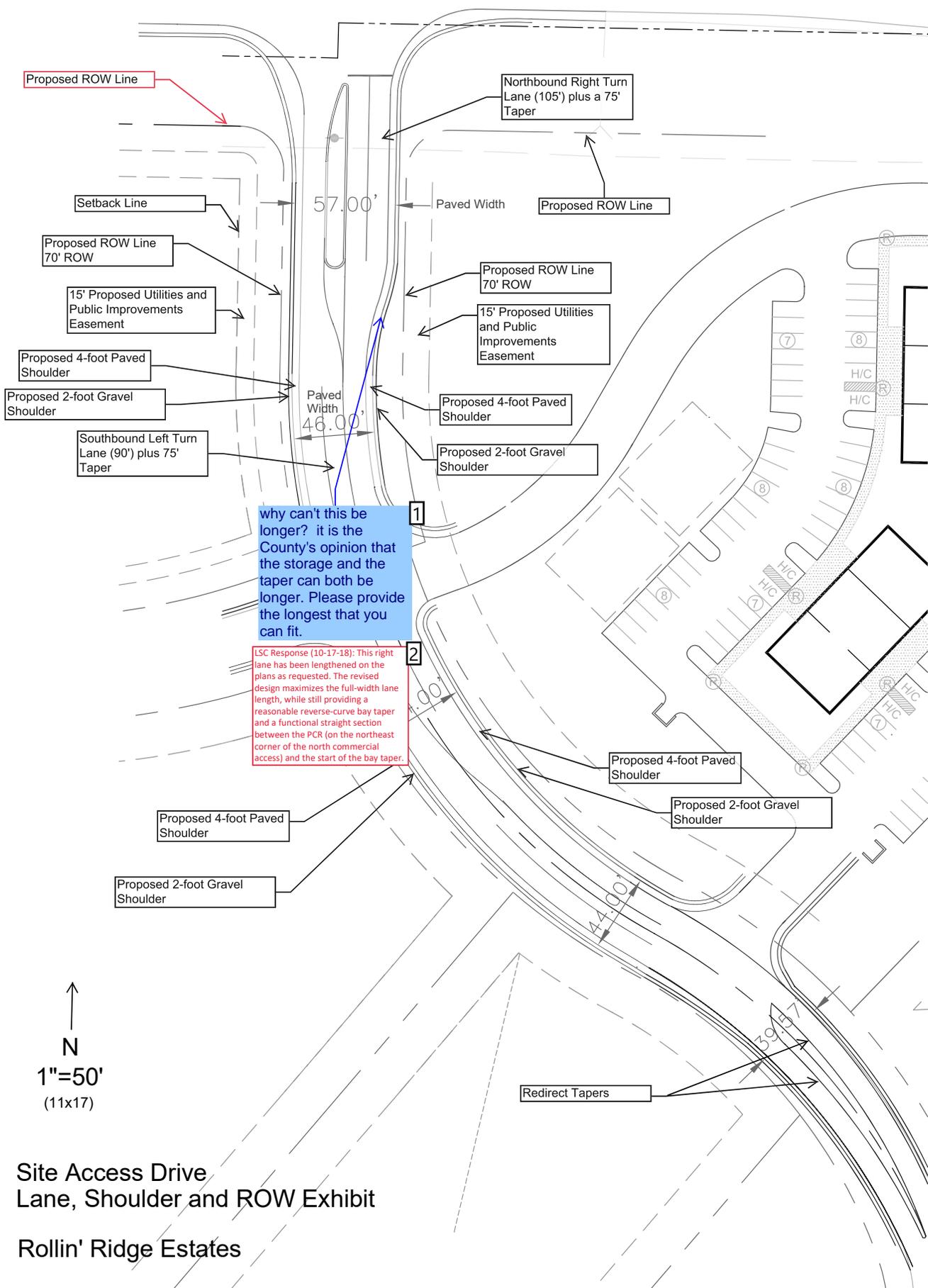
 Number: 2 Author: dsdnijkamp Subject: Engineer Date: 10/2/2018 3:50:20 PM

[A deviation is required for this spacing.](#)

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Cherry
Crossing
Drive

Hodgen Road



Proposed ROW Line

Northbound Right Turn Lane (105') plus a 75' Taper

Setback Line

Paved Width

Proposed ROW Line

Proposed ROW Line 70' ROW

Proposed ROW Line 70' ROW

15' Proposed Utilities and Public Improvements Easement

15' Proposed Utilities and Public Improvements Easement

Proposed 4-foot Paved Shoulder

Proposed 4-foot Paved Shoulder

Proposed 2-foot Gravel Shoulder

Proposed 2-foot Gravel Shoulder

Southbound Left Turn Lane (90') plus 75' Taper

1
why can't this be longer? it is the County's opinion that the storage and the taper can both be longer. Please provide the longest that you can fit.

2
LSC Response (10-17-18): This right lane has been lengthened on the plans as requested. The revised design maximizes the full-width lane length, while still providing a reasonable reverse-curve bay taper and a functional straight section between the PCR (on the northeast corner of the north commercial access) and the start of the bay taper.

Proposed 4-foot Paved Shoulder

Proposed 4-foot Paved Shoulder

Proposed 2-foot Gravel Shoulder

Proposed 2-foot Gravel Shoulder

N
1"=50'
(11x17)

Redirect Tapers

Site Access Drive Lane, Shoulder and ROW Exhibit

Rollin' Ridge Estates

Number: 1 Author: dsdnijkamp Subject: Engineer Date: 10/2/2018 3:50:23 PM

why can't this be longer? it is the County's opinion that the storage and the taper can both be longer. Please provide the longest that you can fit.

Number: 2 Author: jchodsdon Subject: Text Box Date: 10/17/2018 9:31:01 AM

LSC Response (10-17-18): This right lane has been lengthened on the plans as requested. The revised design maximizes the full-width lane length, while still providing a reasonable reverse-curve bay taper and a functional straight section between the PCR (on the northeast corner of the north commercial access) and the start of the bay taper.



Development Services Department
 2880 International Circle
 Colorado Springs, Colorado 80910

Phone: 719.520.6300
 Fax: 719.520.6695
 Website www.elpasoco.com

DEVIATION REVIEW AND DECISION FORM

Procedure # R-FM-051-07
 Issue Date: 12/31/07
 Revision Issued: 00/00/00

DSD FILE NO.:

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General Property Information:

Address of Subject Property (Street Number/Name): 16390 Highway 83

Tax Schedule ID(s) #6127000064:

Legal Description of Property: THAT PT N2N2 SEC 27-11-66 DESC AS FOLS; COM AT NW COR SD SEC 27, TH S88<54'14"E ALG N LN OF SD SEC 1974.02 FT TO THE NW COR OF THE E2NE4NW4 SD SEC 27, TH S 00<06'40"E ALG W LN OF SD E2 50.04 FT & POB, TH S00<06'40"E 1262.73 FT, S89<30'26"E 443.60 FT, N00<00'00"W 585.28 FT, N90<00'00"E 454.78 FT, S00<00'00"E 247.11 FT, N90<00'00"W 127.15 FT, S00<00'00"E 340.99 FT, TH S90<30'26"E 1212.80 FT, N00<24'12"W 393.03 FT, N02<29'28"W 870.43 FT TO S LN OF THE N 30.0 FT SD SEC 27, TH N88<54'17"W 856.46, S01<05'43"W 20.0 FT, N88<54'17"W 430.09 FT TO W LN NW4NE4 & POB

Subdivision or Project Name: Rollin' Ridge

Section of ECM from Which Deviation is Sought: 2.3.2 Design Standards by Functional Classification w/ Table 2-5 "Design ADT" for a Rural Collector roadway.

Specific Criteria from Which a Deviation is Sought: Table 2-5 prescribes a maximum Design ADT (Average Daily Traffic volume) of 3,000 vehicles per day on a Rural Collector roadway.

Proposed Nature and Extent of Deviation: This deviation request is to allow an ADT of up to 5,500 vehicles per day for the proposed Collector roadway southernmost corner. Please refer to the collector-standard

The ECM-standard traffic volumes are: Right-of-way to accommodate the projected high traffic volumes. Outside of the right-of-way to accommodate the high traffic volumes. No on-street parking. Seventy

south commercial access, tapering/variable right-of-way south of the south commercial access point, and Local standard 60 feet of right-of-way with two 5-foot public improvements easements south of the transition section.

As part of the 360 feet between Highway 83 and the street spacing is on the two commercial access drives and line spacing is requested where Collector

Not reviewed at all, please submit separately from the TIS. FYI, pavement thickness shall be based off Arterial road classification.

LSC Response (10-17-18): Deviation submitted separately; A paragraph has been added to the TIS to note this pavement design requirement.

Applicant Information:

Applicant: TC&C LLC (Carl Turse) Email Address: carlturse@icloud.com
 Applicant is: Owner Consultant Contractor
 Mailing Address: 17572 Colonial Park Drive, Monument State: CO Postal Code: 80132
 Telephone Number: (719) 488-8600 Fax Number: _____

Deviations must be submitted as separate documents in EDARP

☰ Number: 1 Author: dsdnijkamp Subject: Engineer Date: 10/2/2018 3:50:25 PM

Not reviewed at all, please submit separately from the TIS. FYI, pavement thickness shall be based off Arterial road classification.

☰ Number: 2 Author: jchodsdon Subject: Text Box Date: 10/17/2018 9:33:12 AM

LSC Response (10-17-18): Deviation submitted separately; A paragraph has been added to the TIS to note this pavement design requirement.

☰ Number: 3 Author: dsdgrimm Subject: Engineer Date: 10/2/2018 3:50:16 PM

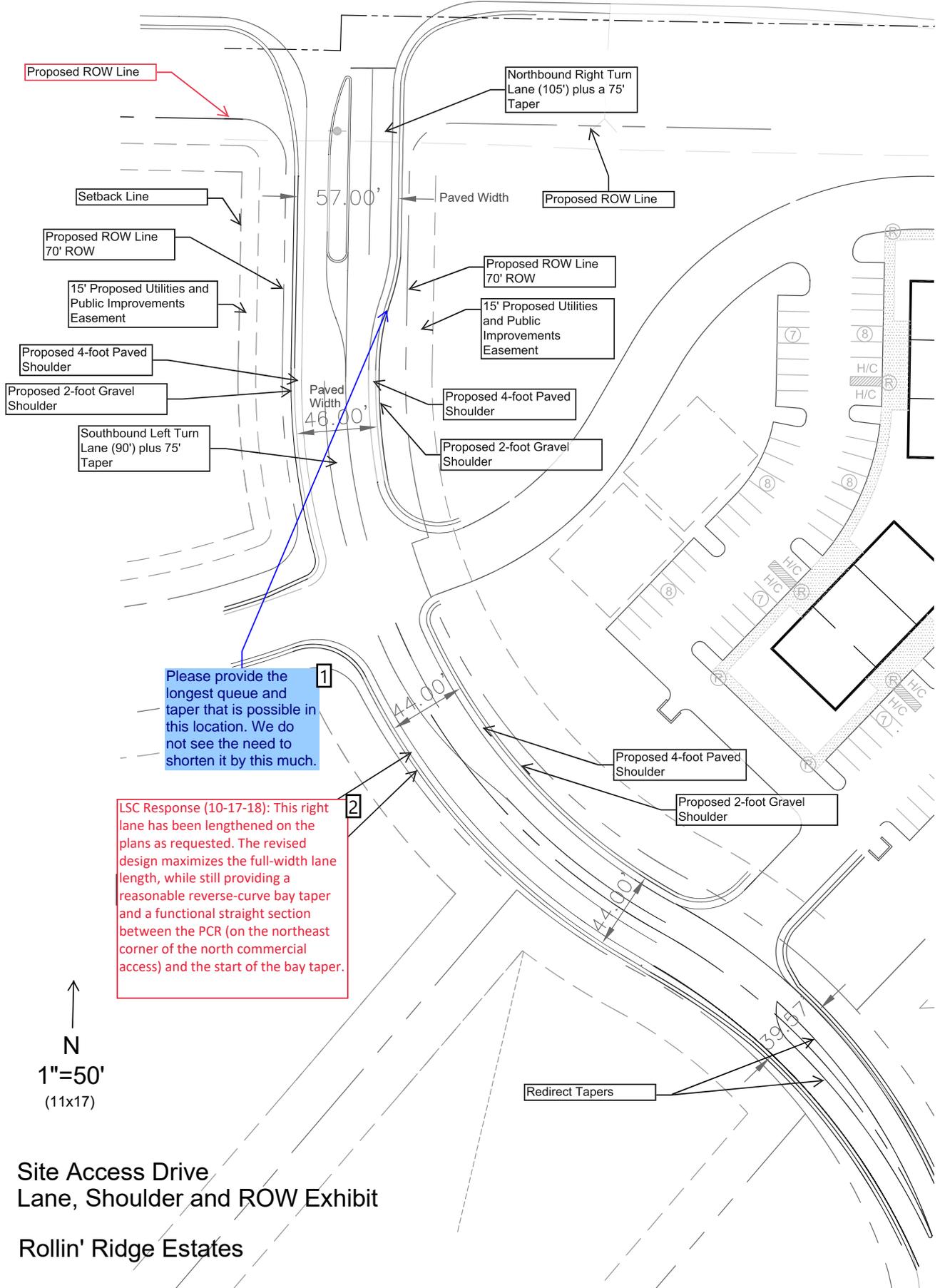
Deviations must be submitted as separate documents in EDARP

Status

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Cherry Crossing Drive

Hodgen Road



Proposed ROW Line

Northbound Right Turn Lane (105') plus a 75' Taper

Setback Line

Paved Width

Proposed ROW Line

57.00'

Proposed ROW Line 70' ROW

Proposed ROW Line 70' ROW

15' Proposed Utilities and Public Improvements Easement

15' Proposed Utilities and Public Improvements Easement

Proposed 4-foot Paved Shoulder

Proposed 4-foot Paved Shoulder

Proposed 2-foot Gravel Shoulder

Proposed 2-foot Gravel Shoulder

Southbound Left Turn Lane (90') plus 75' Taper

Paved Width 46.00'

1
Please provide the longest queue and taper that is possible in this location. We do not see the need to shorten it by this much.

2
LSC Response (10-17-18): This right lane has been lengthened on the plans as requested. The revised design maximizes the full-width lane length, while still providing a reasonable reverse-curve bay taper and a functional straight section between the PCR (on the northeast corner of the north commercial access) and the start of the bay taper.

Proposed 4-foot Paved Shoulder

Proposed 2-foot Gravel Shoulder

44.00'

44.00'



1"=50'
(11x17)

Redirect Tapers

Site Access Drive Lane, Shoulder and ROW Exhibit

Rollin' Ridge Estates

Number: 1 Author: dsdnijkamp Subject: Engineer Date: 10/2/2018 3:50:27 PM

Please provide the longest queue and taper that is possible in this location. We do not see the need to shorten it by this much.

Number: 2 Author: jchodsdon Subject: Text Box Date: 10/17/2018 9:34:37 AM

LSC Response (10-17-18): This right lane has been lengthened on the plans as requested. The revised design maximizes the full-width lane length, while still providing a reasonable reverse-curve bay taper and a functional straight section between the PCR (on the northeast corner of the north commercial access) and the start of the bay taper.

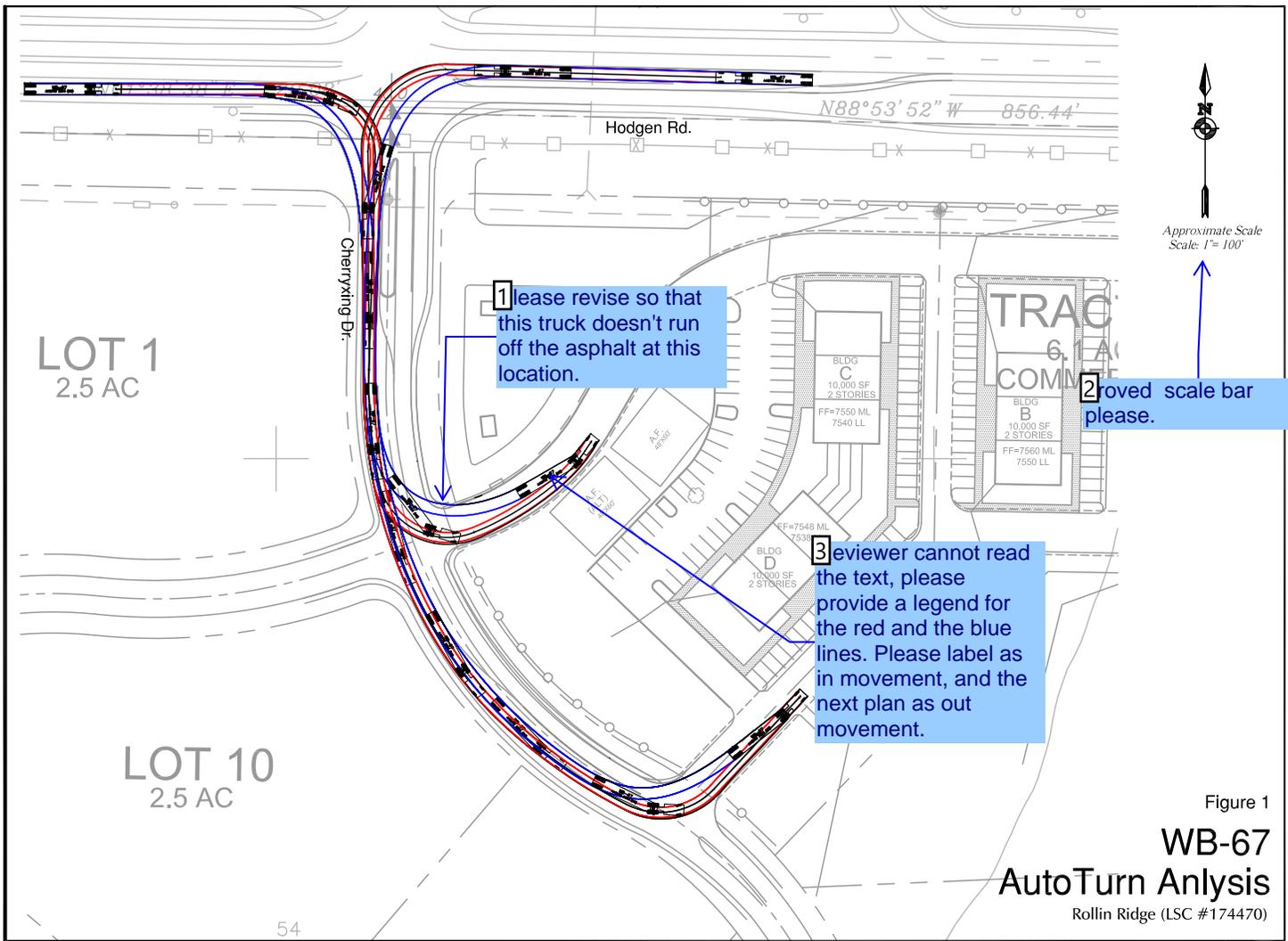


Figure 1
WB-67
AutoTurn Analysis
 Rollin Ridge (LSC #174470)

Page: 101

Number: 1 Author: dsdnijkamp Subject: Engineer Date: 10/2/2018 3:50:29 PM

Please revise so that this truck doesn't run off the asphalt at this location.

Status

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Number: 2 Author: dsdnijkamp Subject: Engineer Date: 10/2/2018 3:50:30 PM

proved scale bar please.

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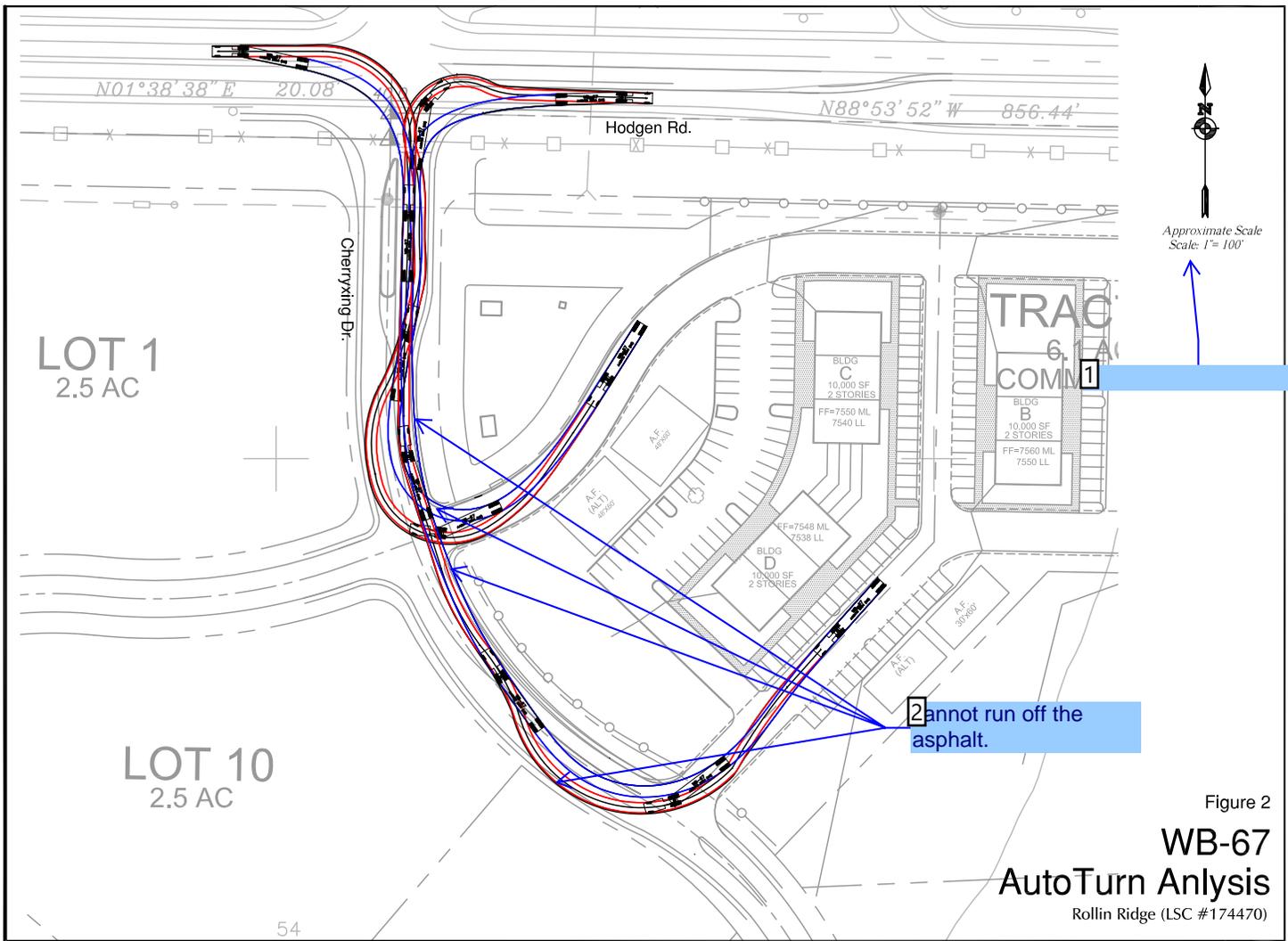
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Number: 3 Author: dsdnijkamp Subject: Engineer Date: 10/2/2018 3:50:28 PM

Reviewer cannot read the text, please provide a legend for the red and the blue lines. Please label as in movement, and the next plan as out movement.

Status

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Number: 1 Author: dsdnijkamp Subject: Engineer Date: 10/2/2018 3:50:32 PM

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Number: 2 Author: dsdnijkamp Subject: Engineer Date: 10/2/2018 3:50:32 PM

cannot run off the asphalt.

Status

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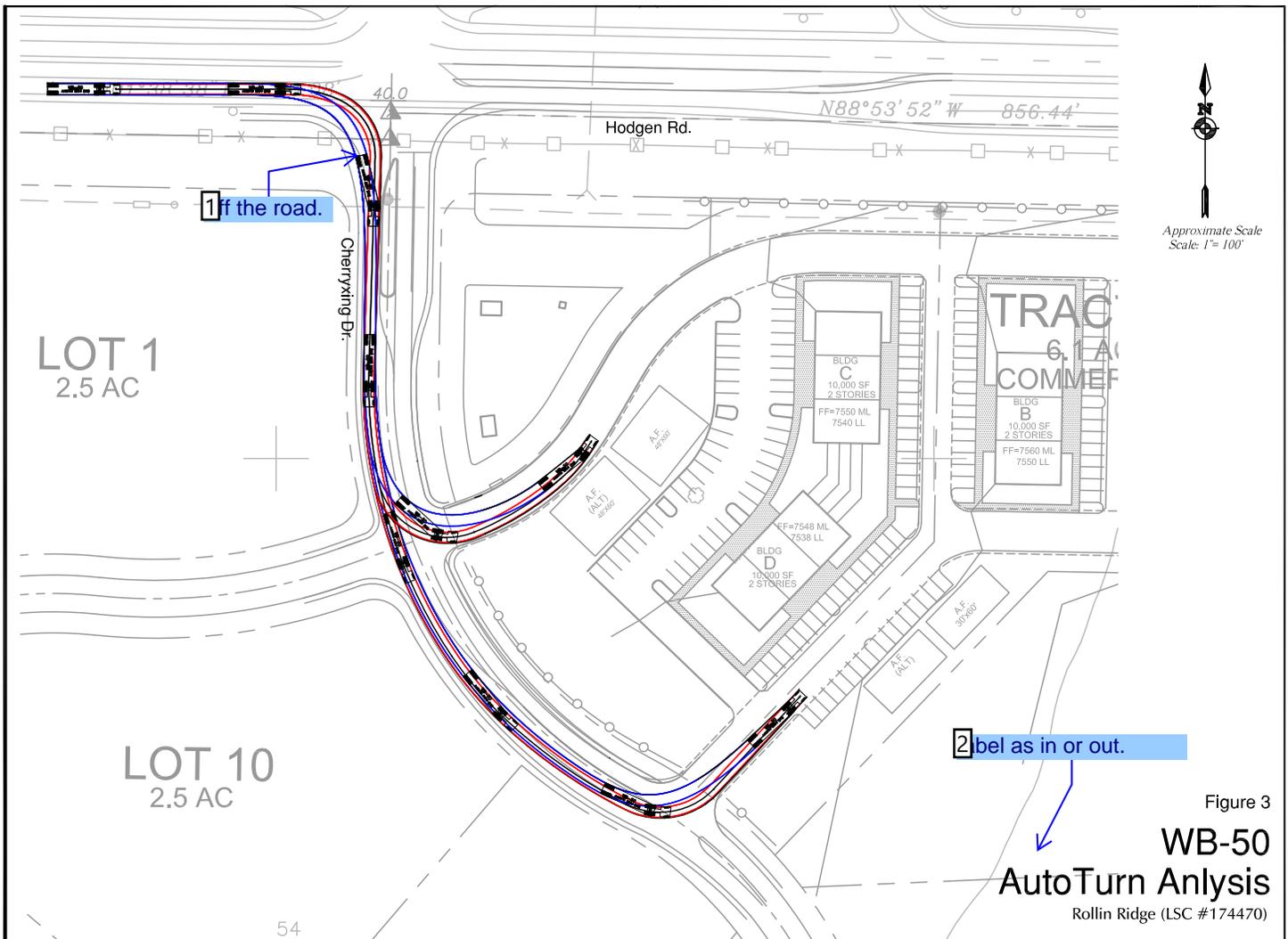


Figure 3
WB-50
AutoTurn Analysis
 Rollin Ridge (LSC #174470)

Number: 1 Author: dsdnijkamp Subject: Engineer Date: 10/2/2018 3:50:33 PM
[off the road.](#)

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Number: 2 Author: dsdnijkamp Subject: Engineer Date: 10/2/2018 3:50:36 PM
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Status

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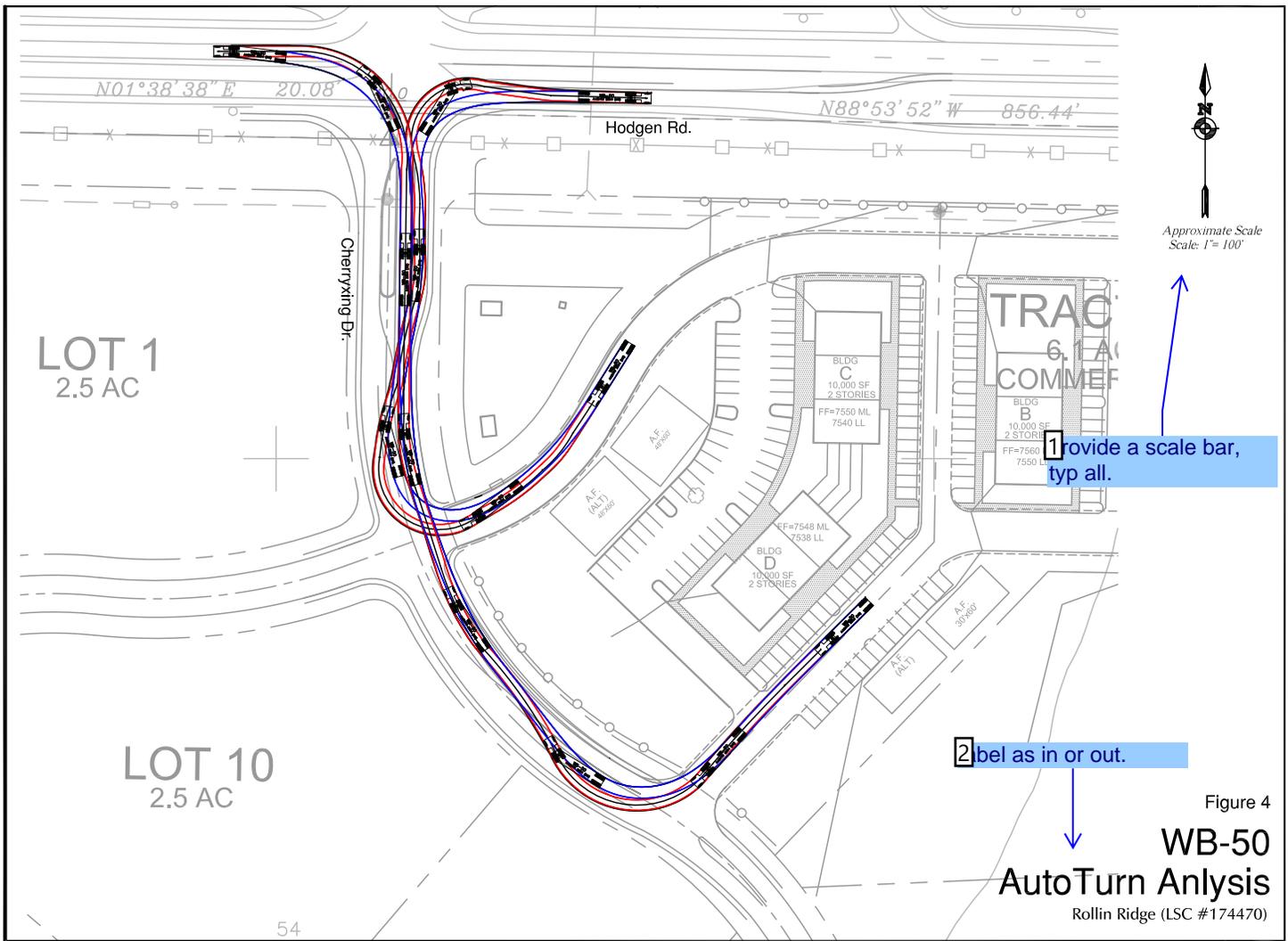


Figure 4
WB-50
AutoTurn Analysis
 Rollin Ridge (LSC #174470)

Page: 104

Number: 1 Author: dsdnijkamp Subject: Engineer Date: 10/2/2018 3:50:37 PM
provide a scale bar, typ all.

Status

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Number: 2 Author: dsdnijkamp Subject: Engineer Date: 10/2/2018 3:50:38 PM
label as in or out.

Status

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☰ Number: 1 Author: dsdnijkamp Subject: Engineer Date: 10/2/2018 3:50:41 PM
please refer to previous comments for other turn movements, typical all sheets.

Status
jchodsdon Completed 10/17/2018 9:35:41 AM



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 2880 International Circle
 Colorado Springs, Colorado 80910

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**DEVIATION REVIEW
 AND DECISION FORM**

Procedure # R-FM-051-07
 Issue Date: 12/31/07
 Revision Issued: 00/00/00

DSD FILE NO.:

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General Property Information:

Address of Subject Property / (Street Number and Name)
 Tax Schedule ID(s) #: 6127000064
 Legal Description of Property:
 THAT PT N2N2 SEC 27-11-66 DESC AS SEC 1974.02 FT TO THE NW COR OF T1N10S00R00E01 SEC 27, TH S00<06'40"E 1262.73 FT, S00<00'00"E 247.11 FT, N90<00'00"N00<24'12"W 393.03 FT, N02<29'28"W 856.46, S01<05'43"W 20.0 FT, N88<54'1

Highway 83

COR SD SEC 27, TH S88<54'14"E ALG N LN OF SD SEC 27, TH S 00<06'40"E ALG W LN OF SD E2 50.04 FT, N00<00'00"W 585.28 FT, N90<00'00"E 454.78 FT, S00<00'00"E 247.11 FT, N90<00'00"E 1212.80 FT, TH N 30.0 FT SD SEC 27, TH N88<54'17"W LN NW4NE4 & POB

Subdivision or Project Name: Rollin' Ridg

Section of ECM from Which Deviation is Sought:

Specific Criteria from Which a Deviation is Sought:

Proposed Nature and Extent of Deviation: The Cherry Crossing Drive intersection gives two intersections. The ECM prescribes design lanes on Principal Arterial roadways where Hodgson Road reflects 250 feet of total full and the eastbound left turn lane approach allocate the available back-to-back left-turn SH 83 intersections.

2.3.7.E.2, and 2.3.7.E.3

Design, Taper Lengths, and Storage Lengths

The westbound left-turn lane length on Hodgson Road at the intersection (about 950 feet - center to center) between the storage distance plus transition taper for left-turn lanes per section 2.3.7.D. The attached exhibit for the proposed 100-foot-long reverse curve taper for this lane at the intersection. The intent of this striping plan is to best allocate the available space between the Cherry Crossing Drive and

Applicant Information:

Applicant: Carl Turse, TC&C, LLC
 Applicant is: ___X___ Owner ___ ___ Cons
 Mailing Address: 17572 Colonial Park Drive
 Telephone Number: 488-8600

Email Address: carturse@icloud.com

State: CO Postal Code: 80132

Engineer Information:

Engineer: Jeffrey C. Hodsdon, P.E., PLS
 Company Name: LSC Transportation
 Mailing Address: 545 East Pikes Peak
 Registration Number: 31684
 Telephone Number: 719-633-2868

Email Address: jeff@LSCTrans.com

Springs State: CO Postal Code: 80903

State of Registration: CO

Fax Number: 719-633-5430

Explanation of Request (Attached diagrams, figures and other documentation to clarify request):

Section of ECM from Which Deviation is Sought: 2.3.7.E.1, 2.3.7.E.2, and 2.3.7.E.3
 Specific Criteria from Which a Deviation is Sought: Turn Lane Design, Taper Lengths, and Storage Lengths

Remove this deviation from the TIS. Not reviewed at this time at all.

Remove this deviation from the TIS. Not reviewed at this time at all.

Status

jchodsdon Completed 10/17/2018 9:35:46 AM

Eastbound Right Turn Deceleration Lane

Cherry Crossing Drive

Restripe for 250' Westbound Left Turn Lane

Restripe for Shared 100' Bay Taper

Existing 400' Eastbound Left Turn Lane

Hodgen Road

Existing Eastbound Right Turn Deceleration Lane

where do I find this exhibit?

Please Refer to updated Site Access Drive Lane, Shoulder and ROW Exhibit dated (8-20-18).

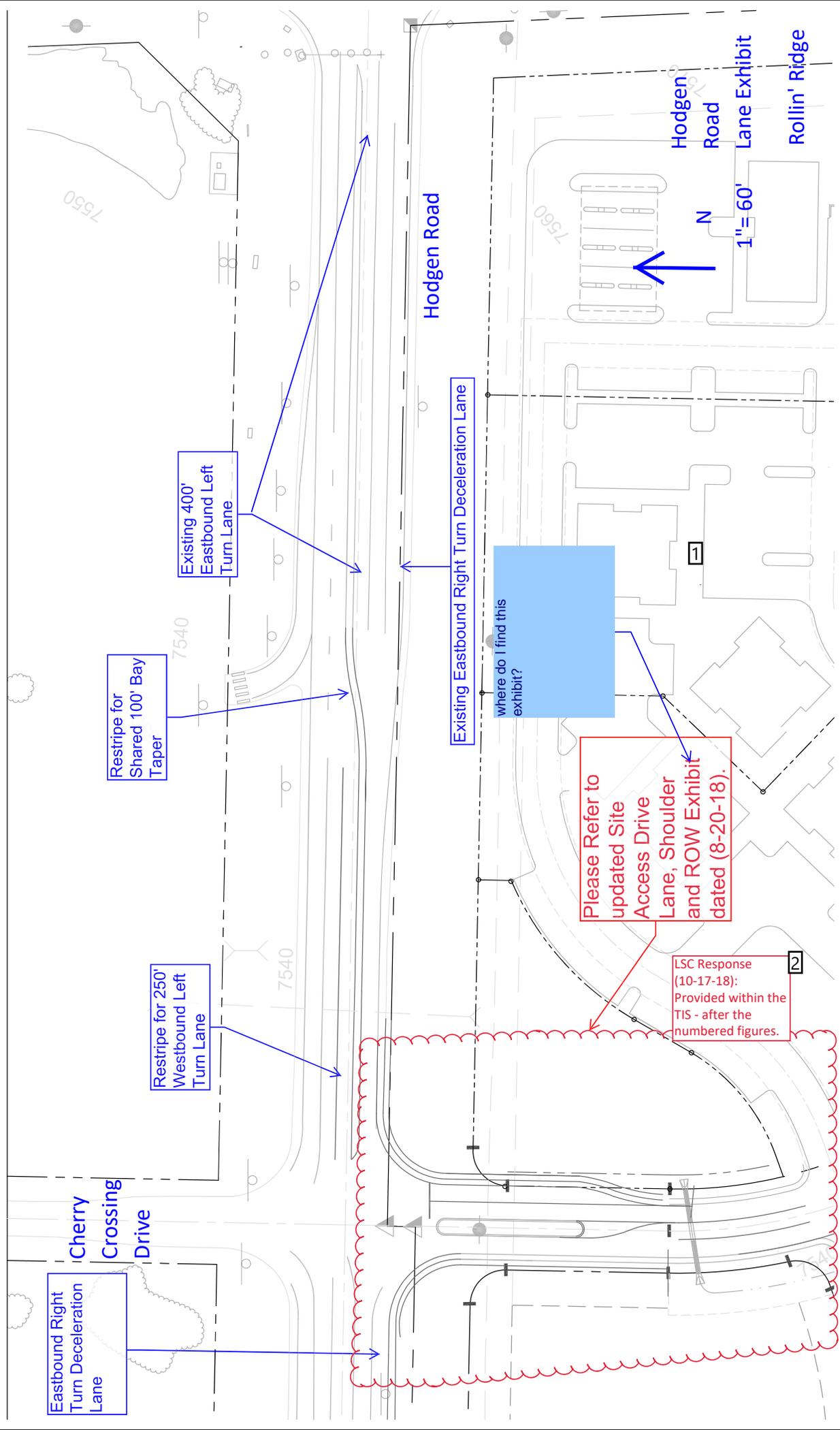
LSC Response (10-17-18): Provided within the TIS - after the numbered figures.

Hodgen Road Lane Exhibit

Rollin' Ridge

1" = 60'

N



Number: 1 Author: dsdnijkamp Subject: Engineer Date: 10/2/2018 3:50:43 PM
where do I find this exhibit?

Number: 2 Author: jchodsdon Subject: Text Box Date: 10/17/2018 10:38:26 PM
LSC Response (10-17-18): Provided within the TIS - after the numbered figures.